

UHF Field-Strength Indicator 430 to 610 MC

for TV Band IV

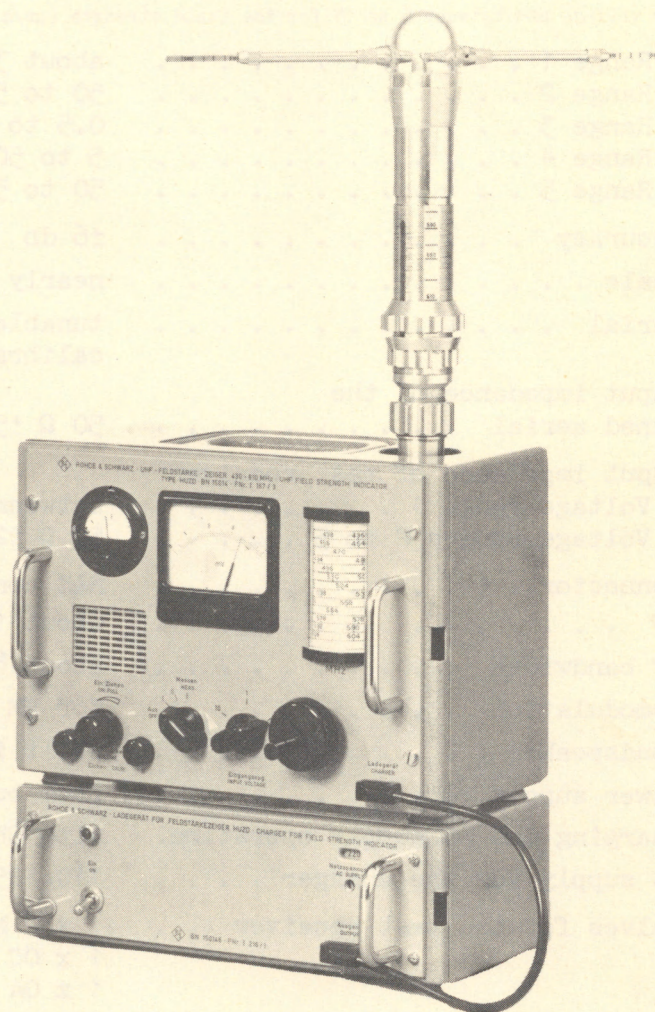
Uses

The UHF Field-Strength Indicator Type HUZD is a compact test set used for surveying the field strength of transmitters in the important TV Band IV. In designing the Type HUZD a favourable compromise between size, weight and accuracy was aimed at to permit the instrument to be easily moved and operated even under adverse conditions. Built-in batteries make the instrument independent of the AC supply. The Type HUZD is, therefore, very well suited for operation on buildings or in the field, where one moves from one point to the other. It is used above all when plans are made for erection of transmitting aerials and when locating the most favourable site for receiving aerials. In addition, the Type HUZD is useful for monitoring transmitter systems by regularly checking the field strength, and it can even be used for approximate direction finding. The Field-Strength Indicator Type HUZD is also used in the laboratory for measuring stray fields from oscillators, and as a tunable vacuum-tube voltmeter.

Description

The instrument is a fully transistorized superheterodyne receiver of high sensitivity. The aerial, a dipole of adjustable length with frequency calibration, telescopes down into the cover of the instrument when not in use. Indication of the field strength is achieved by rectifying the amplified IF voltage in a peak voltmeter calibrated in rms values. An FM demodulator with meter, AF amplifier and loudspeaker facilitates tuning and identifying the transmitters received. After removal of the aerial, the instrument can also be used as a tunable millivoltmeter. The instrument operates from gas-tight, built-in storage batteries which, fully charged, ensure an operating period of about 10 hours.

For recharging use only the transistorized charger provided for this purpose (to be ordered separately). The charging takes approx. 20 hours. The charger can also be switched over to operate as a power supply. The built-in storage batteries are then connected for buffer operation.



UHF Field-Strength Indicator Type HUZD with Charger

UHF Field-Strength Indicator Type HUZD

Specifications

Frequency range 430 to 610 Mc
Single-range drum dial, about 1.6 m long,
average scale discrimination 10 mm/Mc

Ranges of indication

On account of the voltage/frequency response and the physical interrelation of effective antenna height, frequency and input voltage of the antenna, the voltage and field-strength readings are to be multiplied using the supplied correction curves. Depending on the measuring frequency, the factors lie between 0.7 and 1.3 for the voltage and between 6 and 17 for the field strength ($\mu\text{V}/\text{m}$ or mV/m).

Range 1	about 30 to 250 μV	
Range 2	50 to 500 μV	
Range 3	0.5 to 5 mV	
Range 4	5 to 50 mV	
Range 5	50 to 500 mV	
Accuracy	± 6 db	
Scale	nearly linear	
Aerial	tunable dipole, which can be screwed on, calibration tuning	
Input impedance of the tuned aerial	50 $\Omega \pm 5 \Omega$	
Input impedance of test receiver		
Voltage range 1	between 20 and 100 Ω	} unbalanced
Voltage ranges 2 to 5	50 $\Omega \pm 20 \Omega$	
Connector	R&S connector Dezifix B	
IF	about 100 Mc	
IF bandwidth	about 800 kc	
Demodulation	for FM	
Loudspeaker	built in	
Power supply	from built-in gas-tight storage batteries	
Charging and AC supply operation.	with Charger BN 150146	
AC supply for the charger	110/125/160/220/235 v, 47 to 63 cps (7 va)	
Valves for the test receiver	1 x 2 N 1142, 1 x 1 N 21 C, 7 x OC 171, 1 x OC 615, 4 x OC 72, 2 x OA 90, 1 x OA 631	
Valves for charger	2 x OC 30, 4 x OC 70	

Order numbers, dimensions and weights

UHF Field-Strength Indicator Type HUZD	► BN 15014	272 x 190 x 195 mm	approx. 11 kg
(Test receiver with aerial, without charger)			
Charger (including cable)	► BN 150146	272 x 92 x 195 mm	approx. 3.2 kg
Front-panel inscription	German/English		
Colour tone	grey RAL 7001		

We recommend the use of the Field-Strength Meter Type HFU for all measurements for which the accuracy of the Field-Strength Indicator Type HUZD is not sufficient.

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We reserve the right to make any departures from this specification, especially those considered desirable for reasons of improved design.